UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

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Ex parte JOO H. SONG and DONALD TOWNSEND

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Appeal No. 2006-0357
Application No. 10/743,501

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HEARD: FEBRUARY 22, 2006

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Before KIMLIN, TIMM and JEFFREY T. SMITH, Administrative Patent Judges.
KIMLIN, Administrative Patent Judge.

DECISION ON APPEAL

This is an appeal from the final rejection of claims 1-20.

Claim 1 is illustrative:

> 1. A process for making chewing gum comprising the steps of:
>
> using a single continuous mixing apparatus to perform all of the addition and compounding steps necessary to produce gum base;
>
> adding to the single continuous mixing apparatus all of a group of components necessary to make a chewing gum base including an elastomer and a plasticizer, wherein the elastomer is added to the single continuous mixing apparatus separate and apart from the plasticizer and the elastomer is

not preblended or pretreated prior to the addition to the single continuous mixing apparatus;

providing at least two mixing zones in the mixing apparatus;

producing gum base from the mixing apparatus; and

mixing the gum base with other ingredients to produce chewing gum.

The examiner relies upon the following references as evidence of obviousness:

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|---|---|---|
| Reggio et al. (Reggio) | 4,379,169 | Apr. 5, 1983 |
| Naumann (Published European Patent Office Patent Application) | EP 0 273 809 A2 | Jul. 6, 1988 |
| Boudy (Published French Patent Office Patent Application) | FR 2 635 441 A1 | Feb. 23, 1990 |

Appellants' claimed invention is directed to a process for making chewing gum comprising using a single continuous mixing apparatus to perform all the addition and compounding steps needed to produce the gum base. The elastomer of the base is added to the apparatus separate and apart from the plasticizer, and the elastomer is not preblended or pretreated prior to its addition. The mixing apparatus comprises at least two mixing zones.

Appealed claims 1-6, 9-17, 19 and 20 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Naumann in view of Reggio. Claims 7, 8 and 18 stand rejected under 35 U.S.C.

§ 103(a) as being unpatentable over the stated combination of references further in view of Boudy.

We have thoroughly reviewed each of appellants' arguments for patentability. However, we are in complete agreement with the examiner that the claimed subject matter would have been obvious to one of ordinary skill in the art within the meaning of Section 103 in view of the applied prior art. Accordingly, we will sustain the examiner's rejections for essentially those reasons expressed in the answer.

Naumann, like appellants, discloses a process for making chewing gum base by adding elastomer, plasticizer, filler, etc., to a single continuous mixing apparatus having at least two mixing zones. The reference teaches that mixer B maybe eliminated by adding the premix comprising elastomer and filler from mixer A into the first segment of the extruder (see page 9 of English translation). A principal issue on appeal is the claim requirement that the elastomer is not preblended or pretreated before addition to the single continuous mixing apparatus. However, we agree with the examiner that the embodiment of Naumann comprising mixer A and extruder C can be reasonably considered a single continuous mixing apparatus comprising at least two mixing zones. Hence, we find that

Naumann fairly teaches adding elastomer to mixer A, and the single apparatus as a whole, without preblending or pretreating the elastomer. Also, we fully concur with the examiner that Reggio establishes the obviousness of adding all the ingredients of a chewing gum base to a single mixing zone without preblending or pretreating the elastomer (see column 3, lines 34-36). Accordingly, based on the collective teachings of Naumann and Reggio, we are convinced that one of ordinary skill in the art would have found it obvious to eschew preblending and pretreating the elastomer before adding it to the initial mixing zone of a continuous mixing apparatus having at least two mixing zones.

Appellants contend that "*Naumann* teaches away from the process disclosed by *Reggio* because all of the components of the gum base produced by the process in *Naumann* are not mixed in a single mixer" (page 7 of principal brief). However, the claims on appeal do not require a single mixer but, rather, "a single continuous mixing apparatus" having at least two mixing zones, and, as stated above, we find that Naumann fairly depicts a single continuous mixing apparatus. Moreover, we find that Reggio renders obvious the use of a single mixing zone for all the components of a chewing gum base.

We do not understand appellants' argument that "*Naumann* does not disclose, teach or suggest a single mixing apparatus including at least two mixing zones as defined by claim 1" (page 8 of principal brief, third paragraph). Even if we consider only the extruder of Naumann as the single apparatus, the extruder is depicted as having three mixing zones, $C_1$, $C_2$ and $C_3$.

Appellants also maintain that "*Reggio* does not disclose, teach or suggest employing a 'single extruder' to perform all of the necessary addition and compounding steps to produce the gum base as defined by claims 13 and 19" (sentence bridging pages 8 and 9 of principal brief). However, as pointed out by the examiner, Naumann is cited for teaching a single extruder.

As for separately rejected claims 7, 8 and 18, we agree with the examiner that Boudy establishes the obviousness of employing a counter-rotating, intermeshing twin screw extruder in the process of Naumann.

We note that appellants base no argument upon objective evidence of nonobviousness, such as unexpected results, attached to not pretreating or preblending the elastomer before it is added to the mixing apparatus. Indeed, appellants' specification seems to militate against any idea of criticality with respect to

not preblending the elastomer. In particular, Examples 1, 2 and 4 add a powder blend of elastomer and filler to the mixing apparatus.

Appellants' counsel at Oral Hearing, in response to questions referring to the elastomer blends of the specification examples, emphasized that the appealed claims are drafted to define that some, but not all, of the elastomer added is not preblended or pretreated. Appellants' counsel concurred with the statement that, therefore, the appealed claims encompass a process wherein 99% of the added elastomer is preblended or pretreated and only 1% of the elastomer is not preblended or pretreated. Consequently, we find that the processes within the scope of the appealed claims are not substantially different than the process of Naumann wherein 100% of the elastomer is preblended or pretreated before added to the extruder. Also, we find that it would have been obvious for one of ordinary skill in the art to not preblend or pretreat some minor portion of the elastomer feed of Naumann in order to reduce the cost of the overall process. Again, appellants have proffered no objective evidence which demonstrates that processes within the scope of the appealed claims produce an unexpected advantage relative to the process of Naumann.

In conclusion, based on the foregoing, the examiner's decision rejecting the appealed claims is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a).

AFFIRMED

EDWARD C. KIMLIN )
Administrative Patent Judge )
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CATHERINE TIMM ) BOARD OF PATENT
Administrative Patent Judge ) APPEALS AND
) INTERFERENCES
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JEFFREY T. SMITH )
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